

CLAIMS

1. A dual-radio communication apparatus (100, 200) having a first radio device (110, 210) for use in a first
5 frequency band, a second radio device (120, 220) for use in a second frequency band, proximate to the first frequency band, and a controller (230) coupled to the first and second radio devices, **characterized** in that

the first radio device (110, 210) has a first operating
10 ing mode employing a first frequency range, and a second operating mode employing a second frequency range, the second frequency range being smaller than the first frequency range, wherein the controller (230) is adapted to set the first radio device in its second operating mode, when the
15 second radio device (120, 220) is in operation, and otherwise set the first radio device in its first operating mode.

2. A dual-radio communication apparatus as in claim
20 1, wherein the first radio device (110, 210) comprises a frequency-hopping spread-spectrum transmitter (212), which uses a first plurality of hop carrier frequencies within said first frequency range in said first operating mode, and which uses a second plurality of hop carrier frequencies within said second frequency range in said second operating mode.
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3. A dual-radio communication apparatus as in claim 1 or 2, wherein the first radio device (110, 210) is a Bluetooth radio.
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4. A dual-radio communication apparatus as in any preceding claim, wherein the second radio device (120, 220) is a Globalstar satellite radio.

5. A dual-radio communication apparatus as in claim 2, wherein the second plurality of hop carrier frequencies is a subset of the first plurality of hop carrier frequencies.

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6. A dual-radio communication apparatus as in claim 5, wherein the first operating mode employs 79 hop carrier frequencies spaced apart by about 1 MHz and starting at about 2.4 GHz, and wherein the second operating mode employs the first 23 of these 79 hop carrier frequencies.

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7. A method of operating a dual-radio communication apparatus (100, 200) having a first radio device (110, 210) for use in a first frequency band, and a second radio device (120, 220) for use in a second frequency band, proximate to the first frequency band, **characterized** by the steps of

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a) determining whether the second radio device (120, 220) is in operation;

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b) for the first radio device (110, 210), using a first frequency range, if the answer in step a) is in the negative; and

c) for the first radio device, using a second frequency range, the second frequency range being smaller than the first frequency range, if the answer in step a) is in the affirmative.

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8. A method according to claim 7, the first radio device (110, 210) being of frequency-hopping spread-spectrum type, wherein step b) involves the use of a first plurality of hop carrier frequencies, which are distributed over said first frequency range, and wherein step c) involves the use of a second plurality of hop carrier frequencies, which are distributed over said second frequency range.

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Approved for Release